



015118-6SQ.ST25.txt
SEQUENCE LISTING

<110> RAJAMOHAN, GOVINDAN
DAHIYA, MONIKA
PATHANIA, RANJANA
DIKSHIT, KANAK LATA

<120> A method for oxygen regulated production of recombinant
staphylokinase

<130> U 015118-6

<140> 10/814,850

<141> 2004-03-31

<150> US 60/459,439

<151> 2003-04-01

<160> 14

<170> PatentIn version 3.3

<210> 1

<211> 161

<212> DNA

<213> Artificial Sequence

<220>

<223> A nucleotide sequence of expression cassette OXY-1

<400> 1

gatcaagctt atcatcgata agcttacagg acgctggggtt aaaagtattt gagttttgat 60

gtggattaag ttttgagagg tcaataagat tataatatgt gatgcttcac aattctgatg 120

tatggcaaaa ccataataat gaacttaagg aagacctcat g 161

<210> 2

<211> 582

<212> DNA

<213> Artificial Sequence

<220>

<223> A modified staphylokinase SAK-2 gene

<220>

<221> CDS

<222> (16)..(408)

<220>

<221> misc_feature

<222> (18)..(18)

<223> n is a, c, g, or t

<220>

<221> misc_feature

<222> (24)..(24)

<223> n is a, c, g, or t

<400> 2

gaacttaagc atatg gcn gga gcn tat aaa aag ggc gat gac gcg agt tat 51

015118-6SQ.ST25.txt

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr
1 5 10

ttt gaa cca aca ggc ccg tat ttg atg gta aat gtg act gga gtt gat	99
Phe Glu Pro Thr Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp	
15 20 25	
ggt aaa gga aat gaa ttg cta tcc cct cat tat gtc gag ttt cct att	147
Gly Lys Gly Asn Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile	
30 35 40	
aaa cct ggg act aca ctt aca aaa gaa aaa att gaa tac tat gtc gaa	195
Lys Pro Gly Thr Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu	
45 50 55 60	
tgg gca tta gat gcg aca gca tat aaa gag ttt aga gta gtt gaa tta	243
Trp Ala Leu Asp Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu	
65 70 75	
gat cca agc gca aag atc gaa gtc act tat tat gat aag aat aag aaa	291
Asp Pro Ser Ala Lys Ile Glu Val Thr Tyr Tyr Asp Lys Asn Lys Lys	
80 85 90	
aaa gaa gaa acg aag tct ttc cct ata aca gaa aaa ggt ttt gtt gtc	339
Lys Glu Glu Thr Lys Ser Phe Pro Ile Thr Glu Lys Gly Phe Val Val	
95 100 105	
cca gat tta tca gag cat att aaa aac cct gga ttc aac tta att aca	387
Pro Asp Leu Ser Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr	
110 115 120	
aag gtt gtt ata gaa aag aaa taaaacaaaa tagttgttta ttatagaaag	438
Lys Val Val Ile Glu Lys Lys	
125 130	
taatgtcttg attgaatatg tgtagtgaaa ttatctttca tcaaattctc attcatgcac	498
gaatggttct gccccaccta atcagatatt acgtgactta tggggagaaaa tcagtttgga	558
taaaagtgga ggatccagta gccg	582

<210> 3
<211> 131
<212> PRT
<213> Artificial Sequence

<220>
<223> A peptide sequence of modified staphylokinase SAK-2 gene

<400> 3

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr Phe Glu Pro Thr
1 5 10 15

Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp Gly Lys Gly Asn
20 25 30

Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile Lys Pro Gly Thr
35 40 45

015118-6SQ.ST25.txt

Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu Trp Ala Leu Asp
50 55 60

Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu Asp Pro Ser Ala
65 70 75 80

Lys Ile Glu Val Thr Tyr Tyr Asp Lys Asn Lys Lys Lys Glu Glu Thr
85 90 95

Lys Ser Phe Pro Ile Thr Glu Lys Gly Phe Val Val Pro Asp Leu Ser
100 105 110

Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr Lys Val Val Ile
115 120 125

Glu Lys Lys
130

<210> 4
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> A primer SAK-1 for amplification

<400> 4
gattgtagcc atatgtcaag ttcattcgac aaaggaa

37

<210> 5
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide primer SAK-2

<400> 5
cggctactgg atcctccact tttatccaaa ctgattt

37

<210> 6
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide primer SAK-3

<400> 6
gaacttaagg aagatataca tatgtcaagt tcattcgaca aagga

45

<210> 7
<211> 36

015118-6SQ.ST25.txt

<212> DNA

<213> Artificial Sequence

<220>

<223> An oligonucleotide primer SAK-4

<400> 7

gaacttaagc atatggctgg agcttataaa aagggc

36

<210> 8

<211> 411

<212> DNA

<213> Staphylococcus aureus

<400> 8

tcaagttcat tcgacaaagg aaaatataaa aagggcgatg acgcgagtta ttttgaacca 60

acaggcccgt atttgatggg aaatgtgact ggagttgatg gtaaaggaaa tgaattgcta 120

tcccctcatt atgtcgagtt tcctattaaa cctgggacta cacttacaaa agaaaaaatt 180

gaatactatg tcgaatgggc attagatgag acagcatata aagagtttag agtagttgaa 240

ttagatccaa gcgcaaagat cgaagtcact tattatgata agaataagaa aaaagaagaa 300

acgaagtctt tccctataac agaaaaagggt tttgttggtc cagatttatc agagcatatt 360

aaaaaccctg gattcaactt aattacaaag gttgttatag aaaagaaata a 411

<210> 9

<211> 606

<212> DNA

<213> Artificial Sequence

<220>

<223> A staphylokinas SAK gene with primer and terminator sequences

<400> 9

gaacttaagg aagatataca tatgtcaagt tcattcgaca aaggaaaata taaaaagggc 60

gatgacgcga gttattttga accaacaggc ccgtatttga tggtaaagt gactggagtt 120

gatggtaaag gaaatgaatt gctatcccct cattatgtcg agtttcctat taaacctggg 180

actacactta caaaagaaaa aattgaatac tatgtcgaat gggcattaga tgcgacagca 240

tataaagagt ttagagtagt tgaattagat ccaagcgcaa agatcgaagt cacttattat 300

gataagaata agaaaaaaga agaaacgaag tctttcccta taacagaaaa aggttttggt 360

gtcccagatt tatcagagca tattaaaaac cctggattca acttaattac aaaggttggt 420

atagaaaaga aataaaacaa aatagttggt tattatagaa agtaatgtct tgattgaata 480

tgtgtagtga aattatcttt catcaaattc tcattcatgc acgaatgggt ctgccccacc 540

taatcagata ttacgtgact tatggggaga aatcagtttg gataaaagtg gaggatccag 600

tagccg 606

<210> 10
 <211> 377
 <212> PRT
 <213> Staphylococcus aureus

<400> 10

Ser Glu Arg Ser Glu Arg Ser Glu Arg Pro His Glu Ala Ser Pro Leu
 1 5 10 15

Tyr Ser Gly Leu Tyr Leu Tyr Ser Thr His Arg Leu Tyr Ser Leu Tyr
 20 25 30

Ser Gly Leu Tyr Ala Ser Pro Ala Ser Pro Ala Leu Ala Ser Glu Arg
 35 40 45

Thr Tyr Arg Pro His Glu Gly Leu Pro Arg Thr His Arg Gly Leu Tyr
 50 55 60

Pro Arg Thr Tyr Arg Leu Glu Met Glu Thr Val Ala Leu Ala Ser Asn
 65 70 75 80

Val Ala Leu Thr His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Gly
 85 90 95

Leu Tyr Leu Tyr Ser Gly Leu Tyr Ala Ser Asn Gly Leu Leu Glu Leu
 100 105 110

Glu Ser Glu Arg Pro Arg His Ile Ser Thr Tyr Arg Val Ala Leu Gly
 115 120 125

Leu Pro His Glu Pro Arg Ile Leu Glu Leu Tyr Ser Pro Arg Gly Leu
 130 135 140

Tyr Thr His Arg Thr His Arg Leu Glu Thr His Arg Leu Tyr Ser Gly
 145 150 155 160

Leu Leu Tyr Ser Ile Leu Glu Gly Leu Thr Tyr Arg Thr Tyr Arg Val
 165 170 175

Ala Leu Gly Leu Thr Arg Pro Ala Leu Ala Leu Glu Ala Ser Pro Ala
 180 185 190

Leu Ala Thr His Arg Ala Leu Ala Thr Tyr Arg Leu Tyr Ser Gly Leu
 195 200 205

Pro His Glu Ala Arg Gly Val Ala Leu Val Ala Leu Gly Leu Leu Glu
 210 215 220

015118-6SQ.ST25.txt

Ala Leu Ala Pro Arg Ser Glu Arg Ala Leu Ala Leu Tyr Ser Ile Leu
225 230 235 240

Glu Gly Leu Val Ala Leu Thr His Arg Thr Tyr Arg Thr Tyr Arg Ala
245 250 255

Ser Pro Leu Tyr Ser Ala Ser Asn Leu Tyr Ser Leu Tyr Ser Gly Leu
260 265 270

Gly Leu Thr His Arg Thr His Arg Leu Tyr Ser Ser Glu Arg Pro His
275 280 285

Glu Pro Arg Ile Leu Glu Thr His Arg Gly Leu Leu Tyr Ser Gly Leu
290 295 300

Tyr Pro His Glu Val Ala Leu Val Ala Leu Pro Arg Ala Ser Pro Leu
305 310 315 320

Glu Ser Glu Arg Gly Leu His Ile Ser Ile Leu Glu Leu Tyr Ser Ala
325 330 335

Ser Asn Pro Arg Gly Leu Tyr Pro His Glu Ala Ser Asn Leu Glu Ile
340 345 350

Leu Glu Thr His Arg Leu Tyr Ser Val Ala Leu Val Ala Leu Ile Leu
355 360 365

Glu Gly Leu Leu Tyr Ser Leu Tyr Ser
370 375

<210> 11
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-1 for protein expression cassette

<400> 11
gatcaagctt atcatcgata agcttacagg acgctggggtt aaaagtattt

50

<210> 12
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-2 for preparing protein expression cassette

<400> 12
atcttattga cctctcaaaa cttaatccac atcaaaactc aaatactttt aaccc

55

015118-6SQ.ST25.txt

<210> 13
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-3 for preparing protein expression cassette

<400> 13
agaggtcaat aagattataa tatgtgatgc ttcacaattc tgatgtatgg caaaa 55

<210> 14
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-4 for preparing protein expression cassette

<400> 14
atgaggtcctt ccttaagttc attattatgg ttttgccata catcagaatt 50